

### 3. Labour market activation policies: a comparison of the use of tax credits in Belgium, the UK and the US

**Gerlinde Verbist, Lieve De Lathouwer and Annelies Roggeman**

---

#### 1 INTRODUCTION<sup>1</sup>

The introduction of ‘making work pay’ policies, directly subsidizing the net income from work, has resulted in a certain convergence between the continental European welfare states and the Anglo-Saxon liberal welfare states. In the Anglo-Saxon countries, where labour markets are highly deregulated, low-wage jobs are common. Instead of improving the incomes of low wage earners through minimum wages, wage subsidies for *families* on a low earned income has been the main strategy. For example in Canada, ‘back to work bonuses’ such as the Canadian Self-Sufficiency Project (SSP), target an earnings supplement for working single parents who have been on welfare. Tax credits such as the Working Tax Credit (WTC) in the United Kingdom (UK) and the Earned Income Tax Credit (EITC) in the United States (US) have developed into the principal tools for social policy in these countries (OECD, 2000). These policies have been considered as a great success in these countries, as they have contributed to an increase in employment and a reduction of poverty (see Meyer and Rosenbaum, 1999; Blank et al, 1999; Duncan and MacCrea, 1999; Brewer et al, 2001). Given their success, countries in continental Europe are beginning to see these measures as the solution for the trade-off between work and poverty.

Arrangements whereby the net wages of low-paid workers are nevertheless subsidized are ‘alien’ to the traditional Continental and Scandinavian European welfare state. An important objective has always been to guarantee decent (minimum) wage levels, with fairly universal coverage often determined through collective wage bargaining. Historically two important goals of the minimum wage have been to provide workers with a ‘fair’ compensation for their work effort and to raise the standard of living of low

paid workers and their family. The advantages of high minimum wages are that they avert the danger of unemployment traps and working poverty by guaranteeing that even low paid jobs are financially more attractive than unemployment (Dolado et al, 2000).

In recent years, however, several European countries introduced making work pay policies, which raised *net incomes* for low wage earners in order to raise work incentives at the bottom of the labour market. There is no single instrument to make work pay (European Commission, 2003; OECD, 2003a). Work incentives can be stimulated by combining a (partly) unemployment/social assistance benefit with a work income (eg Belgium, France, Portugal). Another instrument is the reduction of social security employee contributions for low wages in order to raise net wages (eg in Germany the mini and midi-jobs, in Belgium the 'reduced employee's social contribution on low wages'). Other countries introduced tax reductions, often for low and moderate work income (eg Denmark). Following the Anglo-Saxon example several countries introduced tax credits, which were mostly part of a broader tax reform (France, the 'Prime Pour l'Emploi' or PPE in 2001; the Netherlands, the Employment Tax Credit (ETC) in 2001). Belgium has also experimented with this instrument: it introduced a 'Low Wage Tax Credit' in 2002 with its recent personal income tax reform (OECD, 2000; Cantillon et al, 2003), but abolished it again in January 2005.

In this chapter we present an explorative analysis of the employment and income effects of the introduction of this tax credit experiment for low wages in Belgium. For this purpose we compare the Belgian measure with the tax credits that are applied in the US and the UK. The continental Belgian version and the Anglo-Saxon version show important differences. In Section 2 of this chapter we provide some background information on the different socio-economic situation in Belgium, being a proto-type of a continental welfare state, and the UK and US being representative for the Anglo-Saxon type of welfare states. In Section 3 we situate the Belgian low wage tax credit within the total of 'making work pay' policies in Belgium and we present the global impact of these recent Belgian policies on the unemployment trap. In Section 4 we describe the Belgian and the Anglo-Saxon versions of the tax credit. Moreover we discuss some findings from empirical research with respect to the impact of the tax credits on employment, poverty and income mobility. Section 5 starts with a description of the methodology used, ie a static tax-benefit model. We then present the results of our calculations, comparing the introduction of the Belgian Low Wage Tax Credit with that of the Anglo-Saxon counterparts in a Belgian context. Section 7 finally concludes our findings.

## 2 BELGIUM AS A PROTO-TYPE OF A CONTINENTAL WELFARE STATE VERSUS THE UK AND THE US AS REPRESENTATIVE FOR A LIBERAL WELFARE STATE

In order to understand the design of policy instruments in various countries – in our analysis the tax credit systems in Belgium, the UK and the US – it is important to understand the broader socio-economic differences of countries, being a reflection of various social policies. In his well-known typologie Esping–Andersen (1990) classifies Belgium, together with France and Germany as a continental welfare state, while the US and the UK are classified under the liberal welfare state type. Continental welfare states differ from liberal welfare states in the degree of employment protection (eg minimum wages), generosity of the welfare state and in the institutionalized power of the social partners.

Without having the ambition to make here an exhaustive analysis, there are three remarkable differences between Belgium and the Anglo-Saxon countries. First, the performance of the Belgian labour market is disappointing. The average *employment* rate (60 per cent of the population aged 15–64 in work) in Belgium is much lower than in the two Anglo-Saxon countries; the gap between the US and the UK is more than 10 percentage points (OECD Employment Outlook, 2004). Secondly, Belgian *social expenditure* is much higher compared to the UK and in particular the US. In Belgium, such as in other continental welfare states, the level of benefit dependency is high. According to OECD calculations the number of benefit dependent persons as a percentage of the 15–64 population in 1999 amounted to respectively 29.6 per cent in Belgium compared to 18.9 per cent in the UK and 13.7 per cent in the US (OECD, 2003b).

Thirdly, the Belgian *income distribution* is more equal than the Anglo-Saxon ones. If we look at the ratio minimum/median<sup>2</sup> wage for the Anglo-Saxon countries in 2000, we find that the minimum wage for full-time employees is much more below median wage than in Belgium (0.364 for the US, 0.417 for the UK against 0.492 in Belgium). Due to this high income inequality, the Anglo-Saxon countries have to deal with a larger group of ‘working poor’. The main social problem in liberal welfare states is poverty. At the end of the 1990s poverty in the US was 17 per cent against 8 per cent in Belgium (Förster and Pellizari, 2000). Poverty is a lesser problem in Belgium because of more generous social benefits and (minimum) wage levels.

Since the late 1990s unemployment traps are perceived in Belgium as an important barrier to an increased labour market participation for low paid

workers. Since the personal income tax reform of 2001, unemployment traps have been reduced. However, net replacement rates,<sup>3</sup> which amount to about 90 per cent for lone parents and couple breadwinners (on maximum benefit), remain high (De Lathouwer and Bogaerts, 2002).

This variety in socio-economic context between the countries explains the differences in purpose and set-up of the tax credits between Belgium and the Anglo-Saxon countries. Tax credits for low wages have a double purpose, namely (1) to make work more attractive and (2) to reduce poverty for low income families. In the Anglo-Saxon welfare states, the tax credit is most important for reducing poverty because of the high incidence of low pay jobs and large income differences in these countries. For Belgium, the Low Wage Tax Credit was installed to reduce unemployment traps. Hence the assumption was that an increase in financial incentives would bring down benefit dependency and consequently increase labour market participation. This measure was introduced against the background of the European Union (EU) Employment Strategy, which puts considerable pressure on European governments to increase their employment rates to 70 per cent towards 2010.

### 3 TAX CREDITS AS AN INSTRUMENT OF 'MAKING WORK PAY' POLICIES

In the European Employment Strategy 'making work pay' policies are a key issue for reducing benefit dependency and increasing labour market participation. The importance of making work pay policies (MWP) is underlined by the specific Guideline eight of the Employment guidelines. This guideline mainly addresses financial incentives to encourage men and women to seek, take up and remain in work (European Commission, 2003). Several welfare states have introduced income arrangements aimed at 'making work pay'. In principle, two policy answers to increase financial incentives are possible: either benefits are lowered or net income from low paid work is increased. In particular, since the 1990s, various continental welfare states have followed the latter policy line by directly subsidizing low wage earners. Such a policy of 'in-work' arrangements can take various forms, eg complementary social benefits to work, reductions of employee's social contributions or tax credits.<sup>4</sup> These new income arrangements entail a stronger integration between social, employment and tax policies. The underlying rationale is that it is better to take an active approach to income arrangements, ie to pay people for working rather than for inactivity.

A strong consensus has been reached in the Belgian Welfare State that structural underemployment should be alleviated without allowing poverty to increase. Hence, activation and MWP policies are combined with work subsidizing. Reducing the generosity of social protection (deregulation) and, in doing so, boosting the financial incentives to accept a regular low paid job, is avoided in Belgium as it would have severe consequences in terms of poverty. Although in the 1980s and 90s benefit levels stagnated under pressure of a worsening of public finances, unemployment traps were not fought by lowering nominal benefit levels.

### **3.1 Combating Structural Underemployment without increasing Poverty: Social Security as a Key Policy Instrument**

The main strategy in Belgium and in other continental welfare states (France and Germany) to combat structural underemployment without increasing poverty has been through reforms in social security financing. These reforms have been primarily demand-driven, by reducing *employers social contributions* in order to reduce the (indirect) wage cost of hiring workers. There is a big debate going on regarding the net employment effects and the concrete modalities of reduced employers social contributions. Evaluation literature on the impact of subsidized job creation on aggregate employment suggests that the net employment effects are much weaker than what one might expect theoretically because of displacement, substitution and dead-weight effects (Marx, 2001; De Koning and Mosley, 2001).

Since the early 1990s, a more supply oriented policy has been pursued, although demand-driven policies were never abandoned. The focus has shifted to the necessity for the unemployed to gain work experience and the need to provide greater financial incentives (de Lathouwer and Marx, 2005). In the late 1990s, the debate on the unemployment trap came high on the political agenda in Belgium. Measures were taken to create greater financial incentives for the unemployed, but the broader objective was to make work more financially attractive in general. An important strategy to increase net wages is the *reduction of employees' social contributions on low wages*.<sup>5</sup> This scheme started in January 2000 and consists in a fixed sum (€95 since June 2003) that is gradually decreased as the wage increases, up to a maximum level. Since then, the financial advantages of this scheme have been gradually improved. According to estimates, about 630 000 workers are benefiting from this measure. The budgetary cost is substantial: it increased from an estimated €96 million in 2001 (before the extension) to €165 million in 2003 (after the extension) (Ministry of Social Affairs, 2003). This cost implies an important income loss for the social security system. Moreover, it has caused a shift from proportional social contributions to progressive social

contributions. This enhances the solidarity principle of social security and weakens the insurance nature of the system. Trade unions are opposed to such reforms, arguing that under an insurance-based scheme all employees should pay contributions (even if the link between benefits and contributions has become weak). Clearly, social contributions legitimize the important role that trade unions play within the management and the implementation of continental social security systems.

### **3.2 From Social Security Towards Tax Credits: a Closer Integration between Social and Tax Policies**

As the approach of reducing employees' contributions has its limits, due to the insurance principle and the lack of alternative financing, increasing net wages for low-wage earners has been an explicit objective in the general tax reform of 2001. Besides a general tax reduction for all income groups, an individual refundable *low wage tax credit* was introduced for low-paid individuals (see the next section for more details). This basic tax credit can be complemented with tax credits for children,<sup>6</sup> which however are applicable to all citizens and not to low-wage earners only. From 1 January 2005, the low wage tax credit was however abolished and replaced by the 'workbonus'. This is, in fact, an elaboration of the *reduction of employees' social contributions on low wage*. Hence we observe again a shift from tax policies towards social security policies. The practical argument, which has been used when abolishing the tax credit, was that its effect is only felt 2 years afterwards. However, this practical disadvantage could have been solved by integrating the tax credit into the monthly withholding tax. We assume that the reasons behind this strategy are more related to the position of trade unions. They have an interest in managing the issue of the unemployment trap through social security (being in their power) and not through taxation.

The reduction of taxes and of the employees' social contributions have substantially reduced the tax burden on wages, in particular for the lowest (minimum) wages. For couple breadwinners working at minimum wage, the employees' tax burden remains very small (see Table 3.1). More detailed calculations reveal that employee social contributions decreased from 13 per cent to 6 per cent. This figure does not yet include the impact of the recent reforms on the workbonus. The margin for reduction with regards to taxes is still larger than that with regards to social contributions.

Tax-benefit calculations on 'typical households' show that the total package of reforms introduced in Belgium since 2000 has had an impact on the net replacement rates for low-wage earners (see Table 3.2). After the

*Table 3.1 The burden of taxes and social contributions as a % of gross wages, Belgium 1992–2003*

	1992	1999	2001	2003
<b>Minimum wage</b>				
Single	27	29	24	21
One parent 2 children	19	19	15	12
Couple breadwinner 2 children	13	13	8	5
<b>Average wage (1)</b>				
Single	39	42	41	40
One parent	35	37	37	36
Couple breadwinner	29	31	30	29

*Note:* (1) The average wage (approx. €30, 425 gross annual wage) is about 200% of the minimum wage.

*Source:* Centre for Social Policy, STASIM (Tax-Benefit Model).

*Table 3.2 Net disposable household income for long-term unemployed with a maximum unemployment benefit in % of net disposable household income in minimum wage work, Belgium (worst case scenario), 1999–2003 (1 January)*

	Full-time minimum wage					Half-time minimum wage				
	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003
<b>Maximum unemployment benefit</b>										
Single	71	69	71	83	81	85	82	83	89	86
Lone parent 2 children	104	96	96	99	97	92	86	86	88	88
Couple breadwinner 2 children	91	88	87	90	90	88	86	86	87	86
Married partner (second partner working), 2 children	85	82	81	81	73	96	94	94	94	83

*Notes:* Simulated reforms (Reduction of employees' social contributions, tax credit, work-related 'back-to-work bonuses' and childcare costs).

*Source:* Centre for Social Policy, STASIM (Tax-benefit Model).

reforms, lone parents no longer lose money in the transition from maximum unemployment benefit to full-time minimum wage. However, net replacement rates for lone parents and couple breadwinners remain high (90 per cent or more). Women who are living with an (earning) partner

(so-called cohabitantes) and enjoying a flat rate benefit when long-term unemployed, see a rise in the net profit of work compared to unemployment. Single people however are facing an increase in net-replacement rates, but their replacement rates were one of the lowest by the end of the 1990s. The rise in replacement rates for single people can be explained by the fact that unemployment benefit levels were increased simultaneously with increasing the net incomes from work. Contrary to the other unemployment categories, single people experienced a stronger rise in benefit levels which exceeded the rise in net income from work.

## 4 LOW WAGE TAX CREDITS IN BELGIUM, THE US AND THE UK

In this section we present a brief description of the Belgian Low Wage Tax Credit (LWTC), the American EITC and the British WTC. We also discuss some findings in the literature with respect to the impact of the tax credits on employment, poverty and income mobility.<sup>7</sup> In Table 3.3 the precise functioning, conditions and amounts of the LWTC, the EITC and the WTC are presented for income year 2003.

### 4.1 The Low Wage Tax Credit in Belgium

Compared to other countries the Belgian tax credit is atypical, as it is granted to low earning individuals and not to families with a low labour income. Consequently, the tax credit is more universal than the American and British counterpart. Eligible low wage earners should earn a yearly (taxable) wage of no less than €3,850 and no more than €16,690. The maximum yearly amount in basic tax credit is €520 (incremental introduction of €78 in 2002, €266 in 2003 and €440 in 2004). The amount of the tax credit increases as a function of net taxable earned income (phased in) until it reaches a maximum level (plateau) and then decreases again from a certain level of earned income onwards (phase-out). A phase-in of 40 per cent means that an extra earned Euro increases net income with €1.40, whereas a phase-out of 40 per cent implies that net income increases with €0.60. The cost has been estimated at €450 million (Valenduc, 2002). Criteria such as numbers of hours worked, number of children or childcare costs are not taken into account.

#### **Impact on labour supply**

The Belgian LWTC is considered to be too modest to have a decisive impact to accept a low paid regular job (Marx, 2001). Valenduc (2002) also



Table 3.3 Overview of the assumptions made to introduce the various tax credits in STASIM, amounts in €/year (income year 2003)

	LWTC Belgium	EITC (US)	WTC (UK)
<b>Criteria for allocation</b>			
Income concept	activity income (Y) assumption: activity income = net taxable labour income	earned income assumption: earned income = net taxable labour income	gross taxable labour income (ie before deduction of work expenses and social contributions)
No. of hours worked per week	–	–	minimal 16
<b>Calculation tax credit</b>			
Individual/joint	Individual	Joint (not for cohabiting couples)	Joint (also for cohabiting couples)
Income before/after application marital quotient	before	before	before
Balanced with personal taxes?	yes	yes	yes
Refundable	yes	yes	yes
		0 children	single
Maximum amount	520	316	2,312
Bonus for employment of 30 or more hrs/week	–	–	–
Bonus for childcare costs	–	–	–
			70% of max. 205/week, resp. 303/ week for 1, resp. 2 or more children
<b>Phase-in:</b>			
lower limit	3,850	0	0
upper limit	5,130	4,128	6,196
formula or %	(Y – 3,850)/(5,130 – 3,850)	7.65%	34%

<b>Phase-out:</b>						
lower limit	12,840	nm: 5,162 m: 5,989	nm: 11,358 m: 12,186	nm: 11,358 m: 12,186	7,671	7,671
upper limit	16,690	nm: 9,290 m: 10,118	nm: 24,542 m: 25,369	nm: 27,873 m: 28,700	16,459	pe: 20,056 fe: 22,605
formula or %	(16,690-Y)/(16,690-12,840)	7.65%	15.98%	21.06%	37%	37%

Notes: nm = not married; m = married; pe = part-time employment; fe = full-time employment.

Source: Based on Ministerie van Financiën, 2004; Internal Revenue Services, 2003; Brewer, 2003.

arrives at the conclusion that because of its universal and straightforward character the effectiveness of the tax credit as a labour supply incentive is weakened.

### **Impact on income mobility**

As the Belgian tax credit is granted on an individual base, it is far less confronted with a low wage trap for two-earners than the Anglo-Saxon versions. Due to this individual grant, Belgian two-earners are slower to reach the phase-out as Anglo-Saxons are. Consequently, two-earners in Belgium are less restricted to climb up the income ladder through training or promotion to higher wage level.

### **Impact on poverty**

From the perspective of poverty alleviation it is very important whether the subsidy is granted to individuals or to families. Cantillon et al (2003) show that the LWTC goes relatively more to the middle and higher regions of the welfare distribution. This broader spread is again related to the fact that the tax credit is granted on an individual basis and that family income capacity is not taken into account. Apparently, two-earner families benefit most from the refundable tax credit. As the level is very modest, the impact on poverty is very limited.

## **4.2 The US EITC**

The EITC was introduced in 1975 in the US as an exemption of social insurance contributions for poor working families with children. The system has been extended and reformed repeatedly. After 1993, the amounts of the tax credit have been increased systematically. Since 2002 a few (minor) reforms have taken place, such as the simplification of the rules for determining labour income (Centre On Budget and Policy Priorities, 2004). The level of the refundable tax credit depends on net taxable household earned income, and is thus granted at the family level. At present cohabiting couples are still treated as two singles, which means that they can qualify for EITC on the basis of their individual income. Eligible low wage earners should earn a yearly income of no more than €9,290 (without children) and €28,700 (two or more children). The maximum level of the tax credit varies between €316 (singles) and €3,478 (two or more children) (these are figures for 2003). There is a phase-in, a plateau and a phase-out. The EITC is more generous for families with more children. The tax credit has to be requested, so it is not granted automatically. Take-up is rather high (75–90 per cent), which indicates that EITC is not really stigmatizing. The EITC is paid as a once-only amount

at the end of the year, though the possibility for prepayments exists (Internal Revenue Services, 2003).

**Impact on labour supply**

Geoffrey (2003) has shown that the EITC has delivered an important contribution to the recent increase in employment in the US. The EITC was designed to increase labour participation of single mothers, and this has been realized to a large extent after the increase of the amounts in 1993. The transition from unemployment to work (at a minimum wage) is in general favourable. Only for the second earning partner in the household the effect can be (slightly) negative. Married couples are situated quite often in the phase-out, which makes it less interesting for the second partner to work or to work more (eg switch from a part-time to a full-time job). The overall net effect of EITC on the number of hours worked is said to be positive. The extent to which this relates to economic growth and job growth, remains unclear (Cauthen, 2002).

**Impact on income mobility**

Families in the phase-out (often couples) can face the problem of the low wage trap. This means that there is no incentive to climb up the ladder through training or promotion to a higher wage level. Families in the phase-out often face high marginal effective tax rates. Apart from being a social and an economic problem, containing upward income mobility is also a problem of political legitimacy (Burman, 2003; Marx, 2001). A flatter phase-out can temper the effect of the low wage trap to a large extent. The US EITC is the flattest tax credit of the three, which makes it of course more costly.

**Impact on poverty**

Sixty per cent of EITC payments go to incomes below the poverty threshold. The American Census Bureau estimates that the EITC has kept 4.3 million Americans in 1997 out of poverty. The decline of poverty among children of single parents is especially remarkable. The ratio of net earned income to the poverty line increased from 0.93 in 1993 to 1.06 in 1997. Very poor working families benefit less from the tax credit, but for this group the tax credit also decreases the poverty gap. For women who lose their social assistance and cannot find a job, the situation remains problematic (Cauthen, 2002; Marx, 2000).

**4.3 The Working Tax Credit in the UK**

The WTC or ETC (Employment Tax Credit) is a reform and merged elements of the former Working Family Tax Credit (WFTC) and Disabled

Persons Tax Credit (DPTC). The WFTC originated from the former Family Credit (FC). The WTC, introduced in 2003, is mainly an extension of WFTC. Contrary to the WFTC, families and individuals without children or handicapped persons now also qualify for the credit (Brewer, 2003). The WTC is also more generous and administratively simpler than the WFTC. The amount of the tax credit can now be changed throughout the year when conditions of the beneficiary change (eg changes in earned income, number of hours worked). The thresholds for granting a tax credit are now determined on the basis of gross joint taxable income (ie before deduction of work expenses and social contributions) instead of on net taxable earned income. This change was introduced to improve the incentives for two-earners (Inland Revenue, 2002). As in the EITC, the WTC depends on household labour income. In this way two-earners are not favoured compared to one-earners.

Married and cohabiting couples are treated in the same way. Eligible low wage earners should earn a yearly income of no more than €16,459 (without children) and €22 605 (with children). The maximum level of the tax credit varies between €2,312 (singles) and €4,586 (lone parent or couple) (figures are for 2003). Apart from income from work, number of hours worked and childcare costs are also relevant criteria for determining the level of the tax credit. The number of hours criterion is heavily criticized because it is not always straightforward to determine an average number of hours worked per week. By including childcare costs the working-life balance is also taken into account, as these costs are often a barrier for low pay individuals to take up a job. There is no phase-in, only a phase-out (Inland Revenue, 2002; Brewer et al, 2001). The credit is paid out as an addition to wages in order to enhance the link between the credit and employment. However, this can feel more stigmatizing than a once only yearly payment because the tax credit appears on the pay slip every month (Brewer et al, 2001).

### **Impact on labour supply**

According to simulations of the Institute for Fiscal Studies (IFS) the net effect of the WTC on labour supply is positive (Brewer, 2003). For non-working persons the transition to employment is positive. However, there is little incentive to work more hours, especially for couples, which reduces the employment effect. These simulations give thus similar results as the US EITC. British policy (just as the American tax credit) mainly wants to have at least one person working in each household (Joseph Rowntree Foundation, 2001).

**Impact on income mobility**

Just as EITC, the WTC puts a restraint on income mobility. The phase-out of WTC is less flat than the American measure, which causes a bigger low wage trap problem than with EITC (Burman, 2003; Marx, 2001).

**Impact on poverty**

Few empirical data are available on the impact of the former WFTC on poverty and welfare. It was assumed however that the redistributive impact of WFTC would be larger than its employment effect (Marx, 2001). Recent simulations of the IFS with respect to the WTC indicate that households with children at the bottom of the distribution have the relatively strongest reduction of the marginal tax rate, whereas families in the three highest deciles lose considerably because of the means test. Compared to single earners, two-earners are the main losers. The simulations show that 1.6 million families have a higher effective marginal tax rate, against 2.4 million that see a decrease of their tax rate. The extension of the WTC to families without children or handicapped persons is, according to the IFS, not effective as a poverty reducing strategy, as these groups are often not at risk of poverty (Brewer, 2003).

## 5 METHODOLOGY

For evaluating the Belgian LWTC, we have used a tax-benefit standard simulation model (STASIM), which was developed by the Centre for Social Policy at the University of Antwerp. The STASIM calculates gross-net income trajectories for standard families on benefit and on work income in Belgium (for the assumptions in STASIM, see Appendix 3.1). With STASIM we have simulated the Belgian, British and American tax credit schemes on hypothetical family types and wages. This methodology has advantages and disadvantages (De Lathouwer, 2004):

*Advantages:*

- The great advantage of standard simulations is that the mutual connections between communicating institutional rules can be clarified. It is thus possible to control and clearly demarcate the different variables used.
- Policy efforts can be evaluated from different perspectives. It is thus possible to relate simulated net household income (in work or in unemployment) to poverty lines and to relate income from work to income from social benefits.

*Disadvantages:*

- Standard simulations put emphasis on the financial aspects of work and benefit dependency. Non-financial elements however, can also play an important role in the trade-off between work and non-work (availability of childcare, job quality, preferences for autonomous time, etc).
- As we use hypothetical family types, the results only apply for these types and are not necessarily representative for the population.
- Net disposable income and replacement ratios present only a static picture. Long term financial consequences (eg through promotion) cannot be taken into account.

We have performed calculations for six typical households: a single, a breadwinner couple (ie with one income) and a two-income couple, and this each time for no and for two children in the family. We have simulated the transition from long-term unemployment to employment for various wage levels (100, 110, 120, 150 and 200 per cent of the guaranteed average minimum monthly income (GAMMI)). We assume that the unemployed receive the maximum unemployment allowance. This worst case scenario reveals the maximum potential unemployment traps.

In our simulations we have calculated the gross-net trajectories for the three tax credit schemes in a Belgian context. This means that we start from the Belgian tax-benefit system, in which we introduce *ceteris paribus* the British and the American tax credit. Table 3.3 gives the various assumptions that are made in the simulation of the various tax credit schemes for the income year 2003. A more detailed explanation is given in Appendix 3.1. Amounts are on a yearly basis and in Euros.<sup>8</sup> In order to calculate the 'net impact' of the tax credit schemes, we also simulated a scenario without a tax credit (the default scenario).

We have calculated the following indicators to evaluate and compare the three tax credits:

- the level of the monthly tax credit (in Euros per month);
- the total extra net revenue, ie the financial gain per month when changing from unemployment to part-time or full-time employment (in Euros per month);
- the labour surplus ratio, ie the ratio of employment income to income from unemployment;
- the 'poverty line ratio', the ratio of total net income at the household level to the poverty line.

## 6 RESULTS

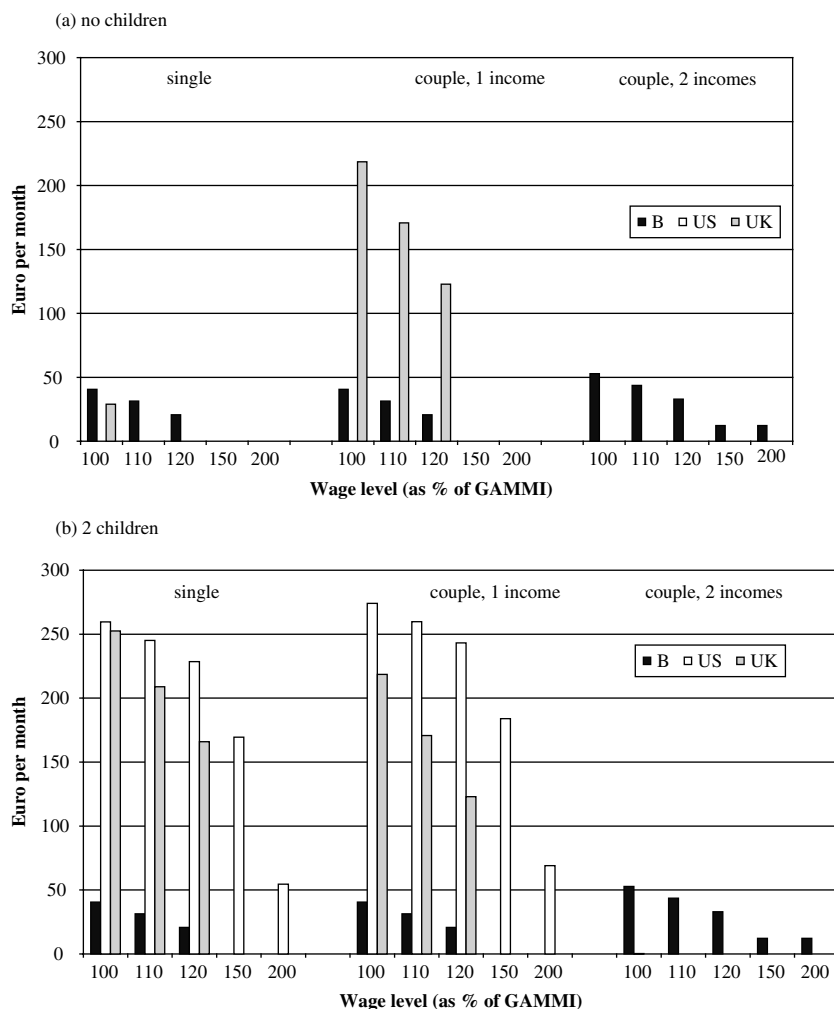
### 6.1 Level of the Tax Credits

In Figures 3.1 (a) and (b) and 3.2 (a) and (b) we compare the level of the different tax credits in Euros per month. Figure 3.1 gives the tax credit entitlement for the transition from unemployment (receiving a maximum unemployment benefit) to *full-time* employment, whereas Figure 3.2 shows the effect of the transition to part-time work. What is most striking is the marked difference in the profile of the Belgian tax credit compared to its Anglo-Saxon counterparts. In almost all circumstances the Belgian system grants a very small benefit: the highest amount is around €55 per month (for a couple with 2 incomes). Families with and without children receive the same amount, illustrating clearly that the Belgian credit is not specifically targeted at families with children. It also shows that it is not family dependent but granted on the basis of individual income; couples with two incomes can also benefit. This contrasts with the Anglo-Saxon measures which clearly and strongly favour families with single earners. Breadwinner couples and couples with two children for example receive €274 per month according to the American method, which is five times more than under the Belgian regime. With EITC and WTC, two income households can hardly benefit from the measures because of the joint income test. The American and British credits are mainly beneficial to families with children (except two-earner couples). Families without children are entitled to only small amounts.

With the transition to full-time employment the tax credit is always situated in the phase-out for the three calculation methods. This can be seen from the decreasing trend of the amounts with increasing wage level. The figures also show clearly that the US tax credit is reduced at a slower pace than the British and the Belgian credit. According to EITC a single parent with two children receives an amount of €260 per month at minimum wage level, and €245 at 110 per cent of GAMMI. With WTC this is €253 and €209, respectively.

The Belgian and the American tax credit are higher for part-time employment than for full-time employment. This low wage trap is avoided with the WTC through the bonus granted for full-time employment. With the transition to part-time employment the Belgian tax credit is at its maximum level (plateau), namely €43.33 per month, because earned income is now low enough (see Figure 3.1b). For two-earner couples the amount is 56 Euro, because the other partner has a labour income that opens rights to a tax credit. According to EITC calculations the phase-in, the plateau and the phase-out can be distinguished, depending on the

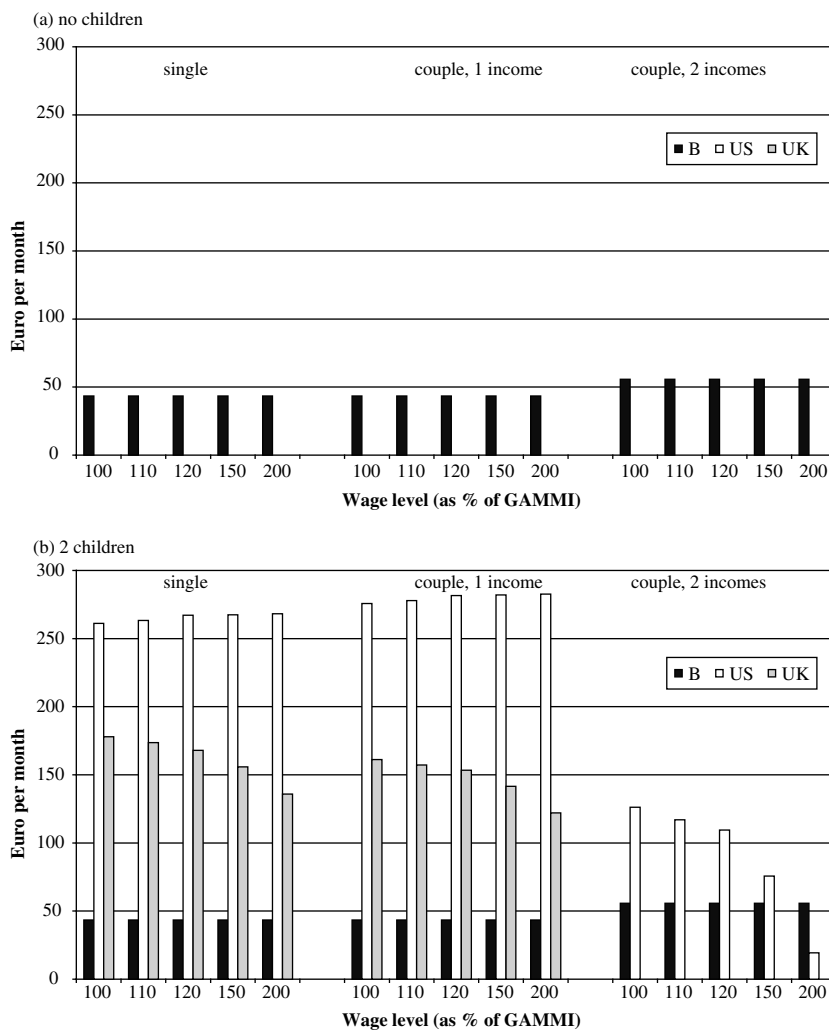




Note: B = Belgian LWTC; US = EITC; UK = WTC

Source: Own calculations with STASIM.

**Figure 3.1** *Level of the total monthly tax credit for low wages (€/household) for different income levels by the transition from long-term unemployment (minimum and maximum unemployment allowance) to full-time employment (Belgium 2003)*



Notes: B = Belgian LWTC; US = EITC; UK = WTC.

Source: Own calculations with STASIM.

**Figure 3.2** Level of the total monthly tax credit for low wages (€/household) for different income levels by the transition from long-term unemployment (maximum unemployment allowance) to part-time employment (Belgium 2003)

family type. With the WTC calculation the tax credit is always in the phase-out (remember that WTC has no phase-in). In the UK the phase-out is already applicable for a joint labour income of 7671 Euro per month. The figures also show clearly that in the UK all families without children and a part-time job do not qualify for WTC.

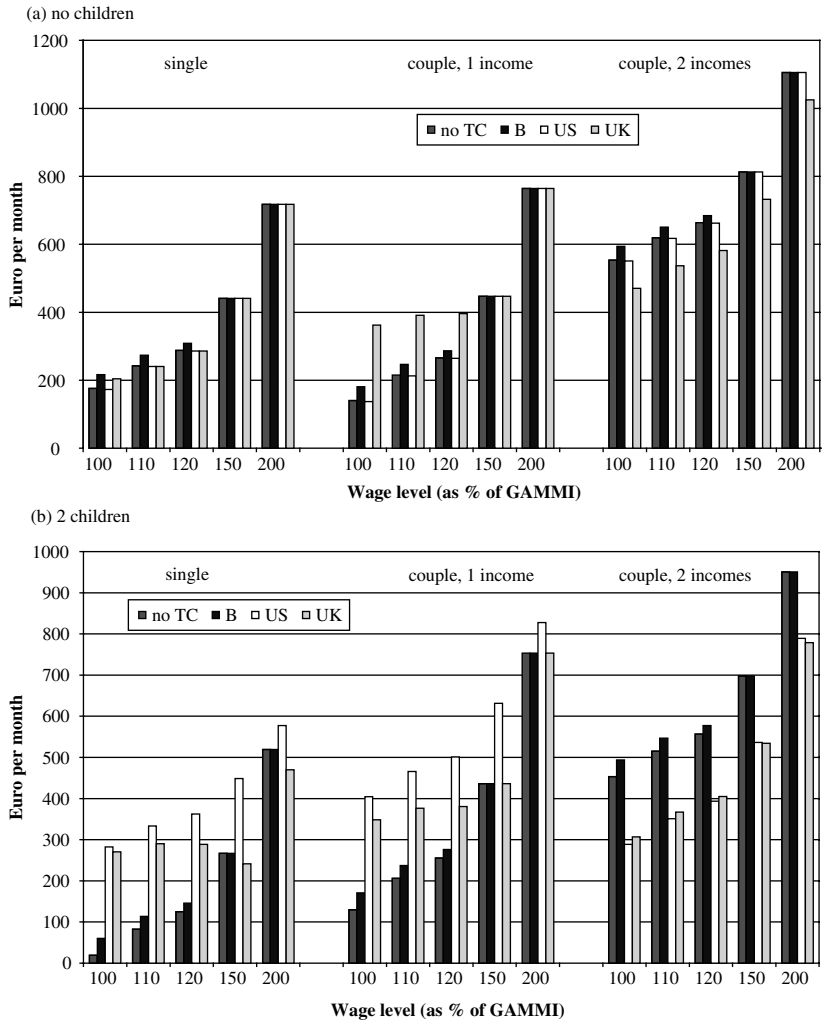
In the rest of this chapter we focus on the transition from unemployment to full-time employment, in order to concentrate better on the effects of the tax credit. In the transition to part-time employment, other factors also play a role (such as the guaranteed income benefit<sup>9</sup>), which fall outside the scope of this chapter.

## **6.2 Total Extra Net Revenue**

Our second indicator is the total extra net revenue a household receives per month when switching from unemployment to full employment. The extra revenue from work is not only determined by the tax credit, but also by other factors – the level of the earned wage, the differences in taxes and contributions between income from work and income from benefit, the loss of the unemployment benefit and of other social allowances for benefit entitled persons, which do not exist for persons in work and finally by extra work expenses, such as childcare and transportation

When there are no children, there are only very small differences in total extra net revenue between the three systems (see Figure 3.3 (a) and (b)). This is of course due to the low amounts of the tax credits for these types, such the tax credit is only a small proportion of their extra revenue. Only for breadwinner couples without children does the UK tax credit provide a considerable gain. The presence of children changes the situation, especially in the case of single earners, both lone parents and couples. These two family types gain most with the US tax credit, but the UK-measure also provides a considerable extra revenue for lone parents and breadwinners with a low income. Two-earners with children benefit most from a Belgian tax credit.

Total extra net revenue in absolute terms increases with wage level according to the three calculation methods. Only with the WTC method is the upward mobility restrained for single parents with two children: starting from a maximum unemployment allowance they have a surplus of only €241 per month at 150 per cent of GAMMI against €290 at 110 per cent. This low-wage trap follows from the fact that at the 150 per cent level the lone parent is not entitled any more to a tax credit as its income has surpassed the upper limit (cf. Figure 3.1 and Table 3.3).



Notes: no TC = no tax credit; B = LWTC; US = EITC; UK = WTC.

Source: Own calculations with STASIM.

**Figure 3.3** Total monthly extra net revenue (€/household) for various income levels by the transition from long-term unemployment (maximum unemployment allowance) to full-time employment (Belgium 2003)

### 6.3 Labour Surplus Ratios

The standard indicator in literature for measuring the difference between non-work and work is the net replacement ratio (OECD, 2004a). We present here the inverse of the net replacement ratio, ie the labour surplus ratio, which is the ratio of employment income to income at unemployment. This indicator presents more clearly what one gains relatively in moving from unemployment to employment.

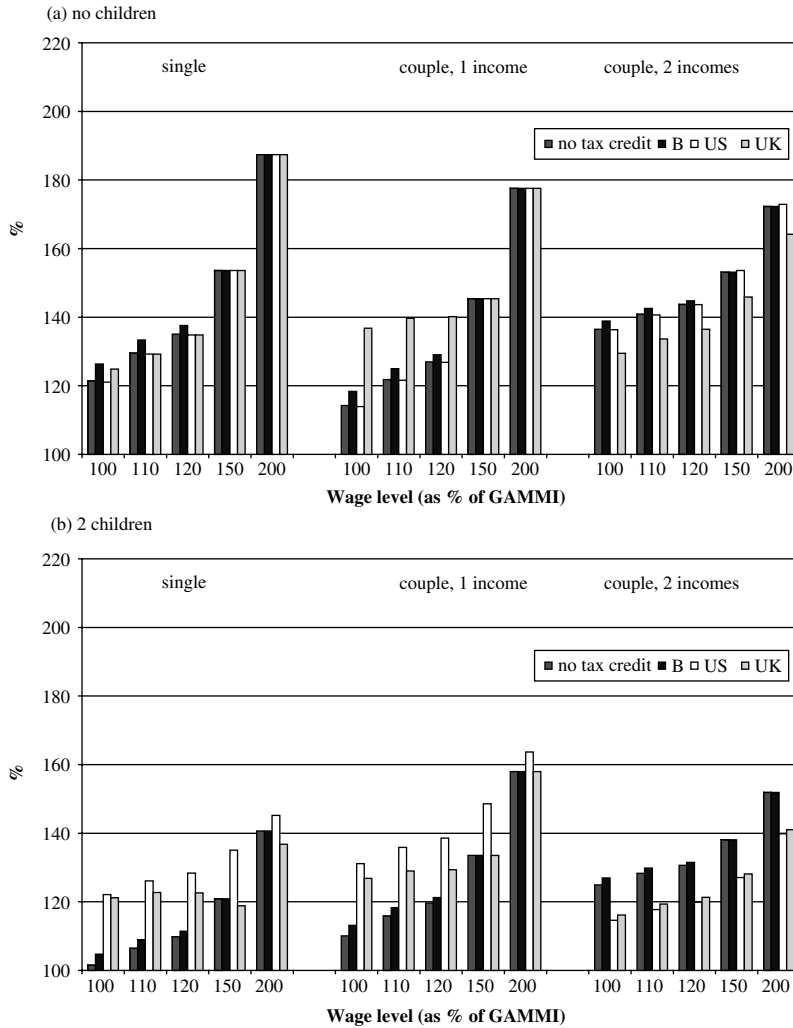
The first bar of each cluster in Figures 3.4 (a) and (b) represents the labour surplus ratio in the assumption that no tax credit is granted in the transition from unemployment to work. An increase in the labour surplus ratio following from the introduction of a tax credit thus indicates that this credit has a positive influence in the fight against unemployment traps.

It is striking that the labour surplus ratios for single parents with children in the case of transition from a maximum unemployment allowance are rather close to 100 per cent for wage levels between 100 per cent and 120 per cent of minimum wage when the Belgian method is used. This means that there is no net gain at all from work. Surplus ratios below 110 per cent (a choice which is of course arbitrary) can be considered as problematic, as there is quasi no financial added value from work. Using EITC and WTC, these ratios climb to higher levels (around 120), what can be considered as an improvement for fighting the unemployment trap. Surplus ratios for singles and two-earners are in general highest with the Belgian tax credit. For breadwinners without children the British method scores best, and for breadwinners with children the American method results in the highest ratios.

Surprisingly, we find that for two earner couples the labour surplus ratios with the UK tax credit are lower than in the 'no tax credit scenario'. This is also when the US system is applied for two earners with children. The reason for these counter-intuitive results can be found in the joint income test of these systems: when the individual is unemployed but his partner works, then this couple can be entitled to a tax credit because of employment income from the partner. When the unemployed individual switches to work, then this couple can lose this high tax credit, thus being worse off than in the 'no tax credit scenario'.

### 6.4 Ratio of Total Net Household Income to EU Poverty Line

Our last indicator is the poverty line ratio, which is the ratio of total net income at the household level to the poverty line. We have used here 60 per cent of median income as poverty line, derived from the data of the Socio-Economic Panel. A ratio below 100 per cent indicates that household income is not sufficient to rise above the poverty line, and thus the



Notes: B = LWTC; US = EITC; UK = WTC.

Source: Own calculations with STASIM.

Figure 3.4 Labour surplus ratio for various income levels by the transition from long-term unemployment (maximum unemployment allowance) to full-time employment (Belgium 2003)

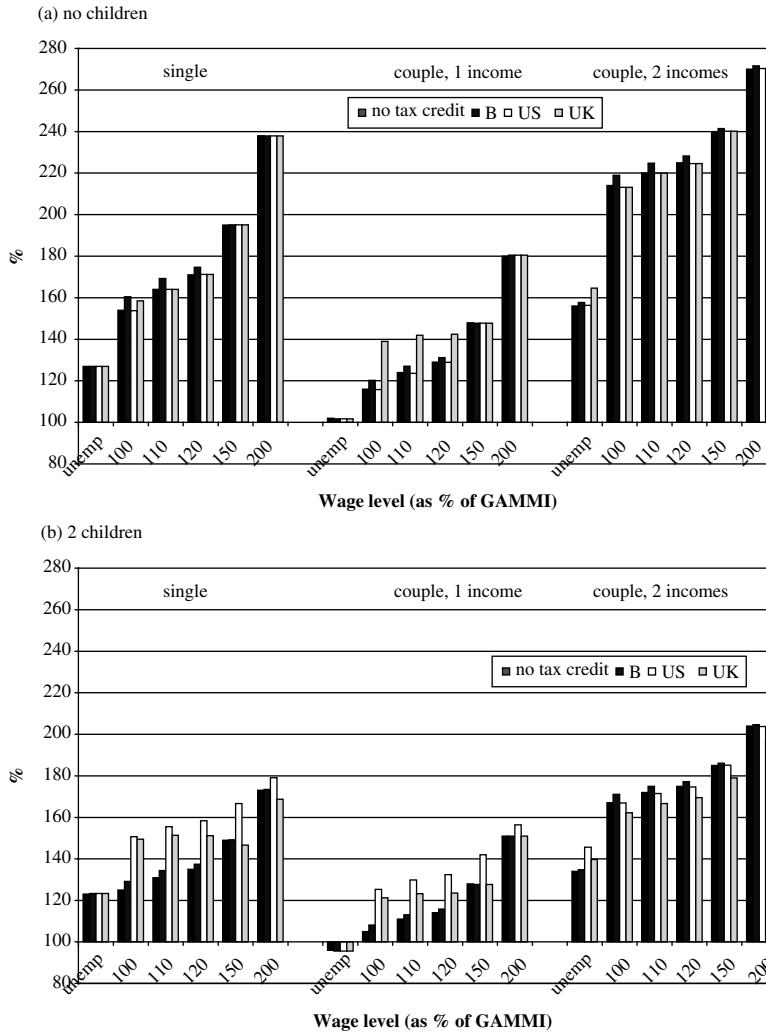
household can be considered as 'poor'. The first bar of each cluster in Figure 3.5 (a) and (b) gives the poverty line ratios in the absence of a tax credit. Increases in the ratio (compared to the 'no tax credit' scenario) point to a beneficial influence of the tax credit.

When long-term unemployed at a maximum allowance, breadwinners with children are poor (with a ratio of 96 per cent). Couple breadwinners without children are also very close to the poverty line. All other family types are not living in financial poverty. Employment – with or without a tax credit – improves everybody's situation. Families without children improve their situation more than those with two children (as the poverty line is lower in the absence of children). For some family types, the tax credit consists of a major improvement. This is the case for single earners with children when one of the Anglo-Saxon credits is applied, which already became apparent in our discussion of the other indicators. A breadwinner couple without children improves its poverty situation mostly with WTC (139 per cent for minimum wage level against 120 per cent for the Belgian measure). One-earners with children improve their situation mostly through EITC (121 per cent of minimum wage against 108 per cent for LWTC).

## 7 CONCLUSION

The disappointing performance of the Belgian labour market and the issue of the sustainability of the welfare state resulted in the 1990s in a more explicit discourse on benefit and employment policies. A consensus was reached that benefit dependency needed to be reduced urgently, but without increasing poverty. Dependency reduction is desirable both from an economic perspective (pressures on sustainability of the system, in particular due to population ageing) and from the perspective of the legitimacy of the welfare state. Moreover, the EU Employment Strategy has put considerable pressure on European governments to increase their employment rates and to reach an agreement on employment-friendly reforms of social security and taxation. With the employment guideline of an average employment rate of 70 per cent Belgium is still far removed from this objective, given an employment rate of 60 per cent of the population aged 15–64 years.

One of the most recent measures to encourage individuals to take up a job is the LWTC, which was introduced in 2002 as a part of the Belgian personal income tax reform of 2001. As we have previously discussed in this chapter, the tax credit was only one of the MWP policies in Belgium. This tax credit was inspired by similar measures in the UK and the US. A tax credit for low wages has two goals. One is to cure the high degree of benefit



Notes: B = LWTC; US = EITC; UK = WTC.

Source: Own calculations with STASIM.

Figure 3.5 Poverty line ratio for various income levels by the transition from long-term unemployment (maximum unemployment allowance) to full-time employment (Belgium 2003)



dependency of certain segments of the population by providing a work incentive (even in countries with a strong job growth and a low unemployment level). A second goal is to increase disposable income of the working poor.

It is no coincidence that tax credits originated in the Anglo-Saxon welfare states, where a high incidence of low pay jobs and large income differences created a need for supplementary incomes to work. High wage inequality has also forced tax credits to be targeted more severely towards the most needy in order to reduce costs. Compared to tax credits such as the WTC in the UK and the EITC in the US, the Belgian basic tax credit is individualized. An individual tax credit is more costly than a family-based one, as more people will be eligible. In Belgium this was traded-off against lower benefit levels (€520 compared to €4,500 under WTC) and lower earned income threshold levels (around €17,000 in Belgium compared to €30,000 under EITC). Consequently the impact on financial incentives and on working poverty (although very limited in Belgium) is much smaller than with the Anglo-Saxon tax credit schemes.

The evaluation of the Belgian tax credit also learns that the legitimacy of in-work benefits through tax policy is very limited up till now. The Belgian tax credit scheme only survived 2 years! In-work benefits have been moved back entirely to the field of social security. At this moment it is not clear if the Belgian tax credit should be considered as an 'accident du parcours' or as the beginning of a structural change in social policies using taxation tools more explicitly as redistribution instruments. As the reduction of social contributions to fight unemployment traps will reach its limits in the near future – the margin after the introduction of the workbonus has become very small – the question remains if and when tax credits will become an important redistribution policy instrument following the example of liberal welfare states in continental welfare states.

## APPENDIX

### Appendix 3.1 STASIM: the STANDARD Simulation Model for Belgium

#### 1 Assumptions made in STASIM for the transition from unemployment to work

Standard simulations start from a large number of assumptions, which have to be kept in mind when interpreting the results (De Lathouwer, 2001):

- In STASIM, simulations are made over a number of social security sector and personal income taxes for the period 1989–2003 (1 January

of each year). We assume that the situations (legislation, family, activities, income) remain constant throughout the year.

- We depart from six standard family types (single, couple one-earners with and without children, couple two-earners with and without children and single parent with children). The family types with children have standard two children, one younger than 3 years and one aged 6 years. In the situation of a working single parent or two-earners in a couple we assume that there is out-door childcare for the youngest child. For each family type with a partner one can choose in the simulation if it is a married or a cohabiting couple. A working partner in the family is always full-time employed at a gross wage of 130 per cent of the guaranteed average minimum monthly income (GAMMI).
- The calculations start from long-term unemployment and look at the financial extra income resulting from the transition to work for a wide range of wage levels, starting from the interprofessional minimum wage (for an employee of minimum 22 years and 1 year seniority) and ranging to 200 per cent of the minimum wage.
- The calculations do not include elderly unemployed. This group is in some circumstances entitled to higher benefits, and thus financial traps are considerably higher for them.
- Calculations are made for various family types and on a yearly basis. Amounts apply for 1 January and are extrapolated over an entire year. We hereby assume immediate settling of all fiscal and other effects. These are strong simplifications, as in reality some income sources are not paid out immediately (eg holiday pay) and final tax liability is only known at the final settlement one year later.
- In the case of unemployment, account is taken of replacement incomes (unemployment allowance) on the one hand and supplementary benefits on the other (increased child benefits, the guaranteed income benefit).
- Childcare costs are taken into account and used in the tax calculation for single parents and couples with children with both partners working. We have used the parent childcare contributions according to the scales of 'Kind en Gezin'. No account is taken of other 'in-work' costs such as commuting or purchasing clothing or a car.

## **2 Assumptions for translating the tax credit rules in STASIM**

### **The Belgian low wage tax credit**

In the personal income tax module net taxable professional income<sup>10</sup> is equated to activity income (cf. Table 3.3). Net taxable professional income is here equal to gross taxable professional income minus fixed professional

expenses and social insurance contributions. We have used the indexed amounts and income limits presented in Table 3.3. We assume that there are no other income sources (eg from financial assets or real estate). For the income year 2003 we have used the tax credit at cruising speed (ie maximum indexed amount of €520) in order to make a better comparison with the Anglo-Saxon credits that have a much longer tradition. The tax credit is, as prescribed, determined at an individual level and before application of the marital quotient.<sup>11</sup> It is settled with personal income taxes and refunded if it exceeds personal taxes with more than €2.5.

### **The earned income tax credit**

The concept of earned income is equated to net taxable professional income (cf. *supra*) in the Belgian system. Contrary to the Belgian tax credit, EITC is granted on the basis of joint taxable professional income. Cohabiting couples however are treated as two singles; in this case children are assigned to the partner with highest earnings. The 'adjusted gross income' condition is not used, as the various deductions (eg maintenance payments) do not apply in STASIM. The 'investment income' is also not applicable in STASIM. We assume that all the other conditions mentioned in Table 3.1 (eg social security number) are fulfilled. We have used the amounts that apply for income year 2003 and converted them into Euros (€1 = \$1.20879, exchange rate in April 2004).

### **The working tax credit**

The income limits of WTC are based on gross taxable professional income (ie before deduction of work expenses and social contributions). As with the American method the credit is calculated on the basis of joint income. So for all couples (also cohabiting) professional incomes have been added up. No account is taken of those aged 50+ and handicapped bonuses, as they are not used in STASIM. All other conditions have been transferred. The indexed amounts have been applied for income year 2003 and converted in Euros (€1 = £0.659645; exchange rate on 8 April 2004).

## **NOTES**

1. We are very grateful to Kristel Bogaerts for her valuable support for the calculations presented in this chapter.
2. For example the proportion of minimum income on median earned income for full-time employees.
3. For example the ratio of income at unemployment to income at employment.
4. 'Making work pay' policies are not confined to the tax-benefit system. Childcare costs are often the most substantial in-work expense and they are commonly identified as a barrier to taking up employment, in particular for low-income households (OECD,

1996). In 2002, childcare was reformed in Belgium in Flanders, resulting in a significant decrease in childcare costs for lower income groups, while higher income groups are now paying more. The reform was intended to be budget neutral. It meant, for example, that childcare costs for a lone-parent family with two (small) children working at minimum wage were reduced by half, thus making low-paid work financially more rewarding. Besides reducing the financial cost, the government also increased the number of public childcare day centers and stimulated private childcare services, eg by improving the social-protection status of this group.

5. Besides this general policy, a number of selective 'back-to-work bonuses' have been introduced since 2000, albeit under very restrictive entitlement conditions. Measures have been launched to reduce specific work-related costs for unemployed persons making the transition to work. Lump-sum annual bonuses were introduced in unemployment insurance to partly compensate for childcare costs (only for lone-parent households) and mobility costs for unemployed persons who have taken up work. The number of beneficiaries under these latter measures is, however, still extremely low (in 2001, only 41 persons received the mobility bonus and 79 claimed the childcare cost bonus). In addition to the aforementioned measures, certain selective benefits for the long-term unemployed (eg increased child benefit) can now be temporarily retained after re-employment.
6. These were also made refundable in the 2001 reform.
7. Another possible effect of a tax credit is the impact on the wage level: a low wage tax credit could cause a wage erosion at the bottom of the labour market. Employers may be inclined to pay lower wages when they know that their low pay workers will be subsidized by the government. Employees may also accept lower wages when they know that the government will compensate the difference. The OECD thinks that wage erosion can be avoided by combining wage subsidies with an increase of minimum wages. The US has increased the level of its tax credit together with its minimum wages. Up until now a possible downward pressure on wages has not been empirically confirmed (Cauthen, 2002; Marx, 2001). Therefore we do not treat this aspect in our discussion of the respective tax credits.
8. For calculating the EITC and WTC amounts to Euros we have used the exchange rates applicable on 8 April 2004.
9. The guaranteed-income benefit is a benefit one receives on top of earned income and whose level varies in function of the previous unemployment allowance.
10. With part-time employment the guaranteed-income benefit can be granted. This is also applied for the American and British calculation method of the tax credit.
11. The tax credit calculations according to the American and the British method also use income before application of the marital quotient.

## REFERENCES

- Blank, R., R. Card and P. Robins (1999), 'Financial Incentives for Increasing Work and Incomes among Low-Income Families', NBER Working Paper No. 6998, Cambridge: National Bureau of Economic Research.
- Brewer, M. (2003), *The New Tax Credits, Briefing Note no. 35*, The Institute for Fiscal Studies.
- Brewer, M., T. Clark and M. Myck (2001), *Credit where it's due? An Assessment of the New Tax Credits, Commentary 86*, The Institute for Fiscal Studies.
- Burman, E. (2003), 'Income Tax Statistics for sample families', *Tax Notes*, 19 January.
- Cantillon, B., B. Kerstens and G. Verbist (2003), 'Les effets redistributifs de la réforme de l'impôt des personnes physiques', *Cahiers Economiques de Bruxelles*, 46 (1), pp. 71–98.

- Cauthen, N. (2002), *Earned Income Tax Credits*, Columbia: National Centre for Children in Poverty.
- Centre on Budget and Policy Priorities (2004), *Earned Income Tax Outreach Kit*, available online at <http://www.cbpp.org/pubs/eitc.htm>.
- de Koning, J. and H. Mosley (2001), *Labour Market Policy and Unemployment: Impact and Process Evaluations in Selected European Countries*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- De Lathouwer, L. (2004), 'Making work pay, making transitions flexible: the case of Belgium in a comparative perspective', Paper for the TLM WP5 Conference, Rotterdam 26–27 April, 19pp.
- De Lathouwer, L. and K. Bogaerts (2002), 'Stimulants financiers et travail faiblement rémunéré. L'impact des reformes de la sécurité sociale et de la fiscalité sur les pièges à l'emploi en Belgique', *Revue Belge de Sécurité Sociale*, **44** (4), pp. 619–701.
- De Lathouwer, L. and I. Marx (2005), 'Low-paid employment, work incentives and social protection', in I. Marx and W. Salverda (eds), *Low-wage Employment in Europe. Perspectives for Improvement*, Leuven: Acco, pp. 71–80.
- Dolado J.J., F. Felgueroso and J.F. Jimeno (2000), 'The Role of the Minimum Wage in the Welfare State: An Appraisal', Bann: IZA Discussion Paper no. 152.
- Duncan, A. and J. MacCrea (1999), 'Household labour supply, childcare costs and in-work benefits: modelling the impact of the Working Families Tax Credit in the UK', London: Institute for Fiscal Studies Working Paper.
- Esping-Andersen, G. (1990), *The Three Worlds of Welfare Capitalism*, Cambridge: Polity Press.
- European Commission (2003), *Making Work Pay. Facts, Figures and Policy Options*, Report to the Employment Committee, Group of experts on Making Work Pay, October 2003, 18 pp (plus annexes).
- Förster, M. and M. Pellizari (2000), 'Trends and driving factors in income distribution and poverty in the OECD Area', OECD Labour Market and Social Policy Papers no. 42.
- Grogger, J. (2003), 'The effects of time limits, the EITC and other policy changes on welfare use, work and income among female-headed families', *The Review of Economics and Statistics*, **85** (2), pp. 394–408.
- Inland Revenue (2002), *The Child and Working Tax Credits*, UK: HM Treasury.
- Internal Revenue Services (2003), *Earned Income Credit, Publication 596*, available online at [http://www.irs.gov/pub/irs\\_pdf/p596.pdf](http://www.irs.gov/pub/irs_pdf/p596.pdf).
- Joseph Rowntree Foundation (2001), *The Employment Tax Credit and the Future of In-work Support*, New York, USA, available online at <http://www.jrf.org.uk>.
- Marx, I. (2001), 'Job subsidies and cuts in employers' social security contributions: the verdict of empirical evaluation studies', *International Labour Review*, **140** (1), p. 30.
- Meyer, B. and D. Rosenbaum (1999), *Welfare, the EITC, and the Labor Supply of Single Mothers*, NBER Working Paper 7363, Cambridge: National Bureau of Economic Research.
- Ministerie van financiën (2004), *Fiscaal Memento* Brussel: Ministerie van Financiën, available online at [http://www.docufin.fgov.be/websedsdd/intersalgnl/thema/publicaties/memento/pdf/FM2004\\_VO1\\_vooraf.pdf](http://www.docufin.fgov.be/websedsdd/intersalgnl/thema/publicaties/memento/pdf/FM2004_VO1_vooraf.pdf).
- OECD (2000), *Employment Outlook*, Paris: OECD.
- OECD (2003a), 'Making work pay, making work possible', *Employment Outlook*, Chapter 3, Paris: OECD.

OECD (2003b), 'Benefits and employment: friend or foe?', *Employment Outlook*, Chapter 4, Paris: OECD.

OECD (2004), *Benefits and Wages: OECD Indicators*, Paris: OECD.

Valenduc, C. (2002), 'La réforme de l'impôt des personnes physiques: ses effets sur l'imposition des salaires, l'incitation à l'emploi et sur la distribution des revenus', *Documentatieblad*, Ministerie van Financiën, **62** (3), pp. 145–203.